

## Introduction

As part of the process to update Arizona's Statewide Long Range Transportation Plan (MoveAZ), regional transportation profile studies will be performed to provide a comprehensive database and decision making tool for the planning, programming, and funding of transportation improvement projects. Each of the 12 regional profile studies will identify and document existing and future transportation issues, needs, and deficiencies on the state highway system, identify projects and investment options to meet regional transportation and safety needs, and provide a prioritized list of bundled projects that can be included in ADOT's priority programming process.

The Grand Canyon Regional Transportation Profile study includes the following state highways:

- I-15: Nevada state line to Utah state line
- I-40: Junction with SR 64 to junction with US 89
- SR 64: Entire length
- SR 67: Entire length
- US 389: Entire length
- US 89: Junction with I-40 to Utah state line
- US 89A: Junction with US 89 to the Utah state line
- US 180: Entire length

The study encompasses nearly 500 miles of state highways, interstates, and business routes within Coconino and Mohave Counties and the Flagstaff District of ADOT.

## Project Work Plan

### TASK 1. Prepare Detailed Work Plan

- Our proposal included a Work Plan based upon our understanding of the Regional Transportation Profile process. On July 27, 2005, key members of the HDR team met with ADOT staff to review the Proposal Work Plan. Changes discussed at the July 27 meeting are reflected in this Project Work Plan.

### Task 1 Product – Technical Memorandum 1: Final Work Plan

### TASK 2. Describing Existing and Future Conditions in the Study Area

The purpose of this task is to describe the existing and future conditions of the eight corridors that are included in the Grand Canyon Region. As the analysis in the Profile Study is based upon the data gathered and assembled in this task, accuracy and completeness of this data will be of utmost importance to the successful completion of the Profile.

The HDR team will religiously follow the Regional Transportation Profile Guidelines, published in April 2005, in the preparation of the Grand Canyon Regional Transportation Profile. The Guidelines identify four major areas to be addressed in this Task:

- Specific issues of relevance and importance to the Region. *No issues were identified in the RFP; however, tourism, specifically to the Grand Canyon and to the National Parks in southern Utah, freight movement via trucks on I-40 and rail in the I-40 corridor, transit in the Flagstaff area and to the Grand Canyon, and crashes on US-89 will be major issues in the Grand Canyon Region.*
- Data to support the evaluation of the Long-Range Goals of the State: Access and Mobility, Economic Vitality, Safety, Stewardship, and Environmental Sensitivity. *Tourism is key to the economic vitality in the Grand Canyon Region. Thus, safely maintaining access and mobility is critical. However, the region is home to not only Grand Canyon National Park, but also to the Navajo and Kaibab Indian Reservations, the Kaibab and Coconino National Forests, Glen Canyon Dam, Lake Powell, the Virgin River Gorge, Wupatki National Monument, Sunset Crater, Pipe Springs National Monument, Vermillion Cliffs, and other cultural and environmentally sensitive areas. Thus, stewardship of the natural resources is equally important.*
- Data collection and formatting for use in defining existing and future conditions in the Region using primarily the HPMS and other

available data sources. *We will use the 2004 HPMS submittal as the basis for much of the data. However, we anticipate that an extensive field check of the data will be necessary to ensure the accuracy of the data. Before we begin the data collection task, we will discuss the data needs and check availability of data with the FMPO, NACOG, and ADOT District.*

- Data required to support modeling. *The HDR Project Manager, Brent Cain, developed the transportation demand model currently being updated for the FMPO, thus he has first-hand knowledge of travel and model capabilities in the Flagstaff region. This model will be used to provide one source of input for travel demand on I-40, US-89, and US-180 in the Flagstaff area. Other sources will be historical traffic counts and historical and forecast visitation to Grand Canyon. Potential growth areas such as in the Colorado City and Valle areas will be addressed to ensure that forecasts based upon historical data are reasonable. The Utah and Nevada DOTs will be contacted regarding traffic counts and forecasts on I-15.*

Four sections of the Regional Transportation Profile Guidelines dated April 2005, list sources and data necessary and provide guidance for the successful completion of this task. *Sections 2, 3, 4, and 6 (Issues for Consideration, Policies and Context, Data and Data Formatting, and Travel Demand Forecasting) of the Guidelines, although not included here because of space limitations, are hereby included by reference in our Work Plan.*

In-person reconnaissance visits will be conducted to identify specific issues and concerns from key stakeholders. This effort will be conducted early in Task 2 and will entail several days of coordinated meetings throughout the study area. This will involve individual visits or coordination with agencies in obtaining specific issues or information that relates to the Transportation Profile Study. The TAC members will assist in identifying key stakeholders.

**Task 2 Product** – Working Paper 1: Existing and Future Conditions

### ***TASK 3. Identify Projected Deficiencies***

The purpose of this Task is to identify projected deficiencies in the study area for the forecast years 2015 and 2030 using the HERS-ST AZ model for highway deficiencies and accepted planning criteria and existing databases for multi-modal system deficiencies.

Six sections of the Profile Guidelines, 2-Issues for Consideration, 3-Policies and Context, 5-Profile Tools and Methods, 6- Travel Demand Forecasting, 7-Performance Factors and Measures, and 8-Performance Thresholds, are identified in Table 2.1 of the Guidelines as applicable to this Task. As in the previous task, the guidance provided in these six sections is hereby incorporated into the HDR Work Plan.

Cambridge Systematics will develop the HERS-ST AZ model during the preparation of the Southeast Profile Study. The model will then be provided through ADOT to the consultants selected for the other Profile studies being conducted. The HDR team, if selected for the Grand Canyon Region Profile, will be in a position to be the first consultant to apply the model in an area other than the area for which it was developed. We will thus closely follow the procedures specified in the model, but will, if we believe it will improve the model, suggest revisions that, if acceptable to ADOT and Cambridge, could still be incorporated into the Southeast Profile. Thus, an important product of this task will be a HERS-ST AZ model that has been successfully applied in two quite different areas of the state and will be readily usable in other regions.

The HDR team will primarily rely on input from the ADOT Public Transportation Division, NACOG, and WACOG, to identify transit services being provided in the region and discussions with transit providers to identify deficiencies.

Bicycle needs will be identified by reviewing the Arizona Bicycle Plan and discussing needs with the State Bicycle Coordinator and local bicycle advocates. Pedestrian deficiencies will be identified through discussions with local communities.



## **Task 3 Product – Working Paper 2: Identified Deficiencies**

### ***TASK 4. Conduct First Round of Public Outreach***

Five public meetings will be conducted at the following locations within the study area; Flagstaff, Tusayan, Page, Fredonia, and Tuba City. At the meetings, the HDR team will present what has occurred in the study process, existing conditions, future projections and deficiencies, project schedule, and future work tasks and meetings. Each meeting will include an open house format and brief presentation. The HDR team will also be responsible for the following:

- Completing tasks outlined in the public involvement plan to ensure public and stakeholder participation.
- Preparing all display boards and handouts for the public involvement meetings and other presentations, as needed.
- Preparing a comprehensive mailing list for this study, and handle all mailings.
- Preparing a newsletter for distribution by mail before the public meetings, as well as for distribution at the meetings. Review by and approval of the ADOT Project Manager, James Zumpf, is required before mailing.
- Preparing and issuing a press release; in coordination with Mr. Zumpf and ADOT Communication and Community Partnerships (CCP).
- Documenting the public involvement process in a Summary Report that will include the press releases distributed prior to the meetings, mailing lists, comments received at the meeting, and associated responses to each comment.

## **Task 4 Product – Summary Report 1: Public Outreach Summary**

## ***TASK 5. Develop a Program of Prioritized Projects***

The purpose of this task is to incorporate the identified deficiencies of Task 3 and the input received during the public outreach of Task 4 and develop a prioritized program of projects that are in concert with the performance-based planning concepts developed for the Arizona Long-Range Transportation Plan. As specified in Tasks 2 and 3, Section 9, Project Improvements, of the Profile Guidelines, is hereby incorporated into the HDR Work Plan and will guide the development of the project definition and cost estimating procedures.

As specified in Section 9, projects will be defined as:

- Corridor Projects, which include improvements such as widening and realignment programmed over a number of years. An example of a corridor project in the Grand Canyon Region is the widening of SR 89.
- Major Spot Projects, which include improvements such as new traffic interchanges or bridge replacement. The recently completed reconstruction of the I-17/I-40 System Interchange, which HDR designed, is an example of a Major Spot Project.

Subprograms, which include pavement and bridge preservation and safety improvements.

- An example of a subprogram is the bridge preservation program in which HDR is currently performing bridge inspection services under an on-call contract with ADOT. The work includes bridge inspections, routine bridge inspections, emergency bridge inspections, development of traffic control plans, design of bridge repair projects, management of bridge repair projects, post-design services, and bridge load ratings.

Cost estimates will include base improvement costs, alignment modification costs, and urban improvement costs. All highway improvement cost estimates and project evaluation will be based upon the procedures identified in Section 9 of the Guidelines.

Transit, bicycle, and pedestrian facility needs will be included in the prioritization process.

**Task 5 Product** – Working Paper 3: Prioritized Projects Program

***TASK 6. Conduct Second Round of Public Outreach***

Six public meetings will be conducted during the second round of public outreach at the following locations; Flagstaff, Tusayan, Page, the Littlefield area, Cameron, and Fredonia. During these meetings the HDR team will present the results of the prioritization process. The HDR team will do all the preparation and documentation for the second round of meetings as was done in the first round. Each meeting will include an open house format and brief presentation.

**Task 6 Product** – Summary Report 2: Public Outreach Summary

***TASK 7. Prepare Final Draft Report***

The Grand Canyon Regional Transportation Profile Study will include the following Chapters:

1. Introduction (discussion on the purpose of the study and a description of the study area)
2. Existing and Future Conditions (Working Paper 1)
3. Identified Deficiencies (Working Paper 2)
4. Initial Public Outreach (Summary Report 1)
5. Prioritized Projects Program (Working Paper 3)
6. Second Public Outreach (Summary Report 2)

Additionally, a draft Executive Summary of the Profile Study will be prepared.

**Task 7 Product** – Grand Canyon Regional Transportation Profile Report and Executive Summary - Final Draft

***TASK 8. Prepare Final Report***

The Final Report and Executive Summary will be prepared following review by the TAC,

incorporation of TAC comments, and approval of James Zumpf.

**Task 8 Products** – Grand Canyon Regional Transportation Profile Report and Executive Summary